

## **Pedagogical Memory and the Transferability of Writing Knowledge: An Interview-based Study of UCI Juniors and Seniors**

Susan C. Jarratt, Katherine Mack, Alexandra Sartor (University of California, Irvine), and Shevaun E. Watson (University of South Carolina)

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### **Abstract**

Researchers conducted half-hour interviews with fifty-seven UCI juniors and seniors while they were completing upper-division writing to discover what they remembered of early writing instruction and how they used it. The interviews broadly confirmed results in similar research that students don't remember prior instruction when they aren't asked to repeat similar tasks, but students over the course of the interview generated a broad range of memories. A substantial group remembered first-year writing in terms of critical thinking and valued it as an introduction to academic discourse. The most prominent example of *active transfer* came from student memories of a first-year composition research experience. A substantial subgroup carried forward a definition of writing as primarily about grammar and generic academic rules. In addition to these examples of active transfer, researchers identified clusters of responses as *unreflective practiced* and *unacknowledged learning*. Results suggest that teachers at both lower- and upper-division courses can assist student writers by actively encouraging pedagogical memories.

### **Research on undergraduate writing**

With this study, we follow in the path of writing researchers who have moved with students through the college years, asking What carries forward, or transfers, from old to new writing occasions? What do students remember from their earlier writing courses and how do these memories influence writing practice in new settings? Methodologically, this study draws on three strands of writing research: studies in cognitive science, learning theory, and composition on transfer (Wardell); longitudinal studies of student writing (Carroll; Sommers and Salz; Lunsford and Fishman); and, developmental approaches to student writers (Haswell; Christopher Thaiss and Terry Zawacki).

While UCI's writing requirement is unusual among the UCs in its inclusion of an upper-division course,<sup>1</sup> there are still substantial gaps in student writing experience over the four years of most students' undergraduate course of study. With this study, we hoped to discover what students do with their knowledge and practice of writing across those gaps. In a first phase (2003-04: see <http://www.writing.uci.edu/retrowriting.pdf>), we interviewed and collected writing samples from thirty-five juniors from each school on campus as they were completing the upper-division requirement. These hour-long interviews yielded some insights but also exposed some troubling gaps. We were encouraged to learn that many students across the disciplines had internalized the idea of writing as a process and a

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<sup>1</sup> UCI requires three quarters of writing of all students. At the lower-division, students may take a two-course composition sequence, beginning with critical reading and rhetoric (39B), and proceeding to a course in argument and research (39A). Or they may elect a 3-quarter interdisciplinary humanities option (Humanities Core Course). The third required course is taken at the upper-division, most often in the discipline of the student's major ("W" course).

mode of learning. Even the most successful, however, lacked fluency in basic writing terminology, failing to identify genres or distinguish modes of development, such as summary and analysis, a phenomenon of forgetting documented by Julie Foertsch (376). Before carrying our project forward, we turned to more recent research in the transfer of knowledge and practices of writing.

David Smit observed in 2003 a dearth of research attention paid to the subject and came to the depressing conclusion that very little transfers from first-year writing. Elizabeth Wardle's work, while acknowledging Smit's finding, shifts the ground to activity-oriented theories of learning, enabling us to address the question of "what transfers?" differently. She observes, "According to context conceptions of transfer, we cannot assume a student did not *learn* skills simply because she does not *use* them in subsequent tasks," or, we would add, give an account of them in an interview setting. With this shift in mind, in the second stage of our research we refocused our attention on students' literate activities rather than on "writing" as a banked knowledge.

In 2006-07, we conducted fifty-seven more interviews with upper-division students, reflecting the university's population in terms of major, UCI matriculant vs. transfer student status, language background, and gender (See Appendices A-D), and using the questions recorded in Appendix E. "Whether transfer occurs is too bald a question," write Perkins and Salomon; "One needs to ask under what conditions transfer appears" ("Encyclopedia" 5). To this group, we still asked the "bald" question, but listened differently to the answers, including the interviewees' distinctive accounts of writing development. The most exciting outcome for us was the way the interview itself became a memory-stimulating activity (a phenomenon Wardle reports as well). Comments from several students make visible the memory work of the interview: For example: "This is bothering me that I don't remember" (Patricia<sup>2</sup>); "It's funny; I've never really asked myself that question [about writing in lower-division courses]" (Andrew); "I don't think I've thought once ever since then back on that course, but I'm positive it did influence my writing" (Leor).

While activity-based writing studies often locate themselves in a setting (e.g., Beaufort), any study of student writers over time necessarily moves from place to place and must attend carefully to student accounts of such movements. In prompting memories about these trajectories, we produced some unanticipated testimonies to the power of writing in college. Like Sommers and Salz, we "didn't ask but nonetheless were offered accounts of changes in students' sense of themselves as writers." For example, Edward reports amazement that he could "produce writing so different from my everyday speaking style. . . . I didn't know I had it in me." Another student reports a moment when "It finally hit home. It's not just writing. It's *my* writing. . . . What my teachers are seeing now is not just words, but me behind the words and that really hit home" (Andrew).

We are aided in coming to terms with the complexity of contextualized scenes of transfer by Christopher Thaiss and Terry Zawacki's *Engaged Writers, Dynamic Disciplines*. Their recently published study of faculty and students at George Mason offers (among other things) a taxonomy of development that we've found helpful in understanding the range of student accounts of transfer. From a multitude of evidence from students writers they posited three stances toward writing in college. They found students early in their college years who held to an authority-based knowledge of "generic academic" rules. Some in Thaiss and Zawacki's sample go on to more advanced stages: radical relativism (every writing situation is different) and, the most advanced, an ability to adapt previous practices to the diverse contexts required by discipline-specific writing demands—a facility parallel to what Wardle might envision as a maximized capacity to generalize.

Thaiss and Zawacki's categorization helps us in coming to terms with the large number of students who remember first-year writing and claim to be "transferring" some aspects of it, but not in terms we might consider appropriate for advanced writers. As Wardle points out, students' ability to

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<sup>2</sup> To ensure confidentiality, we have replaced students' names with pseudonyms.

recall *any* element of writing practice from lower-division courses would suggest that the upper-division course has provided a necessary “affordance for generalization.” That is, an occasion or context for the transfer of learning (Tuomi-Gröhn and Engeström). But, as the research shows, in cases where students became aware that they were being asked to repeat a specific task across courses—to use a recognizable genre or mode of development, for example—or, more interestingly, when they recognized a disjuncture in practice—they were better able to see themselves as developing new abilities and to distinguish discipline-specific writing practices from general composition fundamentals.

We offer here a contribution to the cumulative record the vicissitudes of transfer—an attempt to sort through its manifestations in a particular group of students’ accounts of learning about and practicing writing across the college years. To this end, we introduce our own set of categories, naming three processes of transfer: 1) active (both positive and negative): from generic academic structures and genres to disciplinary practices; 2) unreflective practice: “I just do it;” 3) transfer denial (resistance) and unacknowledged learning.

### **Active Transfer**

A majority (38) of the students we interviewed were able to recall specific moments or examples of transfer of writing knowledge from lower to upper-division writing. Some even offered remarks that would lend encouragement to any writing instructor faced with a sense of fruitlessness as she stares at stack of student drafts. Take, for example, the engineering student who said, “I think every time I sat down to write a paper, I was thinking about what I learned the last time I sat down to write a paper,” (Josh 6) or the economics student who praised composition as “the stepping stone that allowed me to go over into upper-division writing” (William 6). Among these conditions under which such transfer occurs are explicit abstraction, active self-monitoring, and mindfulness. The interview questions allowed students to review past moments of active reflection and to continue the process of developing a meta-critical stance on their identities as writers.

Our interview transcripts reveal a wide range of students’ statements about transfer. Among these are several interesting observations about the formation of a thinking-writing connection in the first year. One BioSci student, for example, remarked that his composition course “broadened my way of thinking...it helped change my perceptions on the world” (Alfonso, 2). Comments such as these give general support to the critical thinking goals of lower-division writing but are not easily translated into the terminology of transfer.

Far more frequent than comments on this order, though, are more concrete statements about transferable elements of writing instruction. To more directly address the question “how do we account for transfer?” we focus on either end of the spectrum of student responses: those statements that convey the most limited vision of the transferability of composition instruction along with the most promising statements about transfer.

#### *Grammar and Transfer*

Several of the students we interviewed identified knowledge of “grammar” as the most transferable element of their lower-division writing instruction (Pete, Lauren, Lan, Amy, Kristin, Justin, David), and by this they mean convention of standard written academic English, including usage, syntax, documentation style, punctuation, spelling, and so on. Some students saw value in this transfer, though we are somewhat skeptical of this valuing. For some students, the focus on grammar as the primary point of transfer between lower- and upper-division reflects a limited ability to identify writing as a complex rhetorical act. It’s discouraging, for example, to hear the comments of a BioSci student who stated, “humanities core helped me in terms of writing. Like how to formulate my sentences and things like that” (9).

We considered students' language backgrounds as one context for these comments on grammar. The group of fourteen students who placed a strong emphasis on "grammar" as part of their writing experiences at UCI, seven were native speakers of English and seven indicated speaking a different first language. Significantly, however, only one of the fourteen students was required to enroll in a composition course designed to assist English language learners. So then, if students' language backgrounds cannot fully account for their attention to grammar, what can? Taking up the idea that students must be provided with the necessary affordances in order to exhibit transfer, one conclusion that we may draw from students' identification of grammar as the overriding category of transfer is that they have not been called upon to repeat the other skills they learned in composition or that those activities are not actively considered as "writing" in the upper division course and so the affordance was not explicitly identified as such.

As a result of the limitation of transferability to grammar instruction, other students identified grammatical correctness as one of the primary elements of good writing (Jennifer, Hillary, Nandini, Lan, Pete, Cindy, Lauren, Matthew, Jan). Some went on to complicate their version of good writing, but most in this group provided a much flatter response to the question of what constitutes good writing such as the psychology transfer student who replied with a single word: "grammar" (Hillary). In the case of this student, once again we see the intersection of explicit abstraction and affordances at work. One of the strongest memories she had of her upper-division writing course involved explicit instruction in sentence structure. Though the student notes writing an "argument paper" which one might assume could provide the necessary affordance to transfer something from composition, it is the classroom context of sentence-level instruction that stands out most in her mind. The student has been instructed in sentence construction at an abstract level and she has the most fluency with language surrounding this topic: she speaks to the importance of variety in sentence structure (7), describes an essay paragraph in terms of a sentence-by-sentence breakdown (6), and even credits her familiarity with sentence structure in helping her feel less apathetic toward writing (6). On the other hand, she struggles to identify the genres of writing she performed in her upper-division course, and is able to name only one: the argument paper, the most "generally academic" of the three. At one point, she makes the claim, that "It's just easier to write if you know how to write," demonstrating a difficulty with articulating any of the practices or skills she uses when faced with a new writing task. This comment focuses our attention on the struggles students face when they approach writing as an unreflective practice—another process of transfer detailed below. Here we see mindful abstraction at work in terms of grammar and sentence structure, but not in terms of higher-order writing concerns. Some sort of transfer does indeed occur for this student, though perhaps not at the level of complexity one would expect from an upper-division writer.

Another student who focuses primarily on grammar shows a striking awareness that his writing experiences might have been more fruitful if he had been given more assistance through the process of transfer. He states: "Obviously they don't say this is what you learned in 39B, so this is what you're going to apply in this class, but I think a lot of it was very implicit" (Pete 6). This student's perceptive comment is especially revealing in light of prior research that has indicated the assumption that students will be able to work from such "implicit" instruction does not provide a context conducive to transfer (Beaufort, Perkins & Salomon, Tuhomi-Grom, Wardle)

#### *Explicit abstraction of modes of development*

Among those students who were able make explicit statements about transfer, some had a more developed language to talk about the experience than those students described above. The most promising of students' reflections on transferability reported the reappearance of genres or modes of development in later writing courses. The most commonly cited genre of writing which students understood as transferable was writing about research, the focus of the last of the composition requirements (Writing 39C and Humanities Core 1C).

Students' ability to recall research writing as a transferable element of their lower-division writing courses would suggest they have been called upon to recognize and produce research in courses beyond the lower division. Indeed, the vast majority (forty-seven) of the students we spoke with took an upper-division writing course with a research component. Contextualizing students' identification of research as a transferable writing practice and their relative facility with language related to this genre within the framework of upper-division writing coursework that requires research supports findings that stress the importance of assignments beyond the first year that help students use the skills they have acquired elsewhere.

In addition to the students who identified the research paper as an especially transferable genre, a smaller number of students also indicated the ability to extract modes of development from the lower-division writing course and apply them in their upper-division coursework. One BioSci student, for example, compares his experiences in lower- and upper-division writing in terms of analysis, indicating that while his lower-division class asked him to look at "pictures and movies" and his upper division Bio lab involves "looking at numbers and graphs," the writing in both courses pointed toward what he calls "the same purpose." That is, they both required students to, as he said, "use these given numbers or pictures to interpret something" (Wen 3). What is so promising about this student's comment is that it conveys explicit abstraction: the student was able to extract analysis and evaluation as particular modes of development and configure and apply them to meet the demands of contrastive settings. The paper he submitted to us, a biology lab report, supports his claims about analysis as a transferred mode of development. The discussion section of his report offers a careful presentation of his lab results, text, tables, and graphs. His analysis is particularly sensitive to audience expectations as he follows the format of a scientific journal article and points to potential areas for further inquiry.

Such abstraction may not always occur as seamlessly as it apparently did for the student I just described. A literary journalism student began her interview by describing the transferability of her composition instruction into her major coursework and her self-sponsored writing activities, when she stated: "...I think humanities core carried over to literary journalism then literary journalism carried over into the newspaper, and then the newspaper carried over to [when] I write for TV now" (1). However, she goes on to complicate this statement by describing her experience with what at first appeared to be a radical difference between genre norms. She describes students new to the field of literary journalism as "so used to academic prose that they would come to creative writing and try to write using topic sentences and body paragraphs" (Priti 7). The instructor of the student's upper-division literary journalism course responded to her and other students' overly-direct application of the genre of "general academic essay" to the work of literary journalism with instruction in the generic conventions of the field—an abstraction which has allowed the student to recognize differences in generic writing conventions across disciplines while also encouraging the transfer of a mode of development. When asked what she *has* carried throughout her writing instruction regardless of genre difference, she states: "Reading a book and thinking of what to write about....It was developing ideas and being analytical" (5). As the student moves away from generic academic writing into more disciplinary-specific genres, she is able to transfer the intellectual processes of the writing practices she developed in lower-division writing. Indeed, the paper she submitted to our study, a piece of literary criticism, confirms that she can engage successfully the characteristics of academic writing outlined by Thaiss and Zawacki: she offers a careful and disciplined close reading of significant passages of a novel, the essay is well reasoned, and addressed to an informed reader. The paper displays exactly the sort of textual analysis the student identifies as the transferable element across her coursework and it indicates her ability to shift between writing contexts. She does not abandon academic writing in favor of a journalistic style, instead she is able to access and use the conventions of an academic essay when the context demands it of her.

Our students' accounts of their experiences with transfer confirm the conclusions drawn by writing and educational researchers who emphasize the importance of mindful abstraction and repeated contexts in the transfer process. The varying degrees to which students experienced these conditions

influence the relative breadth or limitation of their pedagogical memories related to writing. Though thus far we have focused on students' active identifications of moments of transfer, the emphasis on context that pervades this research reminds us that the memories mobilized by and articulated through the interview process do not paint a complete picture. While some students do not actively indicate transfer of knowledge between lower-and upper division writing, many are accurately able to recall components of the composition course, such as their own paper topics, and we can consider these comments an indication of a pedagogical memory carried forward in a positive way. However, not all students we spoke with were able to account fully for their development as writers during the interview process.

### **Learning by Unreflective Practice**

Whereas some students described their experiences of transfer in detailed and unequivocal terms—what we call moments of “active transfer,” others did not (or could not) explain what, when, how, or why cognitive and practical connections existed among different writing courses despite the students' claims that their writing improved. A typical example of this phenomenon is the student who, when asked how she knew to do some writing task in her upper-division class, replied: “I don't know. I just do it” (Sandra 6). Or another student who explained, “I can't recall specific concepts or specific things that I learned in the lower-division course except that I know it improved my writing somehow” (Miguel 1).

The research on knowledge transfer does not seem to address adequately enough the experiences of those students in our study who believe that some kind of learning was carried over from course to course but were unable to describe its nature or identify its cause. The effect seems clear enough to them—they state that they learned at some point in their schooling how to write competently across the curriculum—but how they got there remains mysterious. “Obviously, something has to connect,” explained one student, “but I can't think of what.... I know something important went on...but I don't know” (Cindy 4). Existing categories of transfer do not encompass this particular kind of learning. When a junior biology major tells us that first-year composition “just didn't interest [him]” and was in fact “painful,” yet states in the same breath that “even though it's a different genre, [lower-division] writing will still supplement my writing in biology,” it seems we are in the realm of tacit learning (Miguel 2; see Paul Price). Just because some students may not be able to track the pedagogical paths by which they learned academic writing does not necessarily mean that they are unable to generalize writing skills from the first-year course. The case of this biology student, and others like it, are neither the function of semi-automatic responses to similar educational stimuli (for the student here identifies various ways in which the first-year course was nothing like the biology writing class); nor are they instances of metacognitive awareness—of bridging different learning contexts (as this student attributes his ability to writing across disciplines as “just kind of figure[ing] it out on my own”) (Miguel 4). Our interviews yielded numerous examples and copious language about the point at which “transfer” as such seems to drop off and generalized “learning” picks up. Not ever having been asked before to take a reflective stance on their acquisition of academic writing skills, some students struggled to follow our cues about transfer, and chose instead to simply describe their experiences in their writing courses.

Research suggests that knowledge transfer happens by way of two different mechanisms: low road transfer and high road transfer. Low road, or reflexive, transfer involves the application of tacit knowledge or well-practiced routines within similar learning contexts. When conditions are sufficiently similar to those of a prior learning situation, a “relatively automatized bundle of skills” can be triggered and utilized (Perkins and Soloman 1992, 4). High road, or mindful, transfer, on the other hand, involves the deliberate activation of metacognition wherein the student purposefully abstracts meaningful patterns or principles from the learning situation to apply to a new context. However, when students claim that there were significant connections between their lower- and upper-division writing courses but can't define what those connections are, they are describing a kind of educational experience not captured by these categories.

Between the two poles of “active transfer” and a lack of transfer (or what we are calling “non-transfer”), we discovered a category of experience in writing development that we term “learning by unreflective practice.” We understand “learning by unreflective practice” as the process by which growth in writing occurs in an ostensibly random, or unaccountable, fashion. When pressed, students attribute development to intangible factors, such as “exposure” and “common sense” rather than to direct instruction or specific pedagogical methods. Even when asked to reflect upon their growth as writers, these students do not draw meaningful connections among different learning situations but describe a sense of inevitability about their improvement—that it just happened—somehow. By “unreflective practice” we mean to denote a rote sense; these students are practicing writing but in repetitive or habitual ways. As one student remarked, “I never really questioned it” (Leor 2). To be clear, learning by unreflective practice is different from low road transfer because of the contexts. That is, low road transfer is predicated upon *similarities* of learning contexts wherein such familiarity prompts the retrieval of tacit knowledge; learning by unreflective practice, however, occurs across *different* contexts such that students do seem to be developing as writers without being deliberately guided to retrieve specific skills or make specific pedagogical connections (see Perkins and Salomon). Evidence of learning by unreflective practice in our study may indicate that cognitive development and writing improvement can occur without such affordances for learning in subsequent classes, that progressive or connective learning may occur outside of cued knowledge retrieval. Or, it may also suggest that the resistances produced by the difficulty of academic writing obscures memory of its acquisition.

Students’ descriptions of learning by unreflective practice can be grouped under several thematic headings. By identifying these sub-categories of unreflective practice, we are not advocating them as viable modes of learning but are trying to follow the students’ cues about their own perceptions of their development as writers. Throughout, these students seem to be underestimating their own effort and active role in their education, as well as the value or effect of the direct instruction they received. Unreflective practice, at least as described by these students, is fundamentally about an array of *indirect influences* upon learning. For example, one cluster of descriptions is learning by osmosis, or an effortless absorption of ideas. One student admitted that she wasn’t sure exactly what “comes through” from class to class but remained certain that something did: “I’m a much better writer than I was in high school, and a much better writer than I was my freshman year. So I’m sure those things come through from the lower-division [course]” (Allison 4). One student echoed this sentiment when he explained that “you just pick things up” by reading models, as though principles of writing need not be extrapolated and elaborated but are simply diffused throughout the learning situation and pass through his brain in the process of reading (Tariq 4).

Along the same lines of this biological metaphor is the common theme of learning by exposure, or educational development as accumulation. One student defended the first-year writing requirement stating that “it does help, maybe not directly though,” citing “exposure” as the prime value of the course (Mingyu 6). Another offered an image of “build up” through exposure: for this chemistry student, knowing how to do certain writing tasks “just built up over the years” from high school to his major courses (Mandy 3). Others described the seeming cumulative effect of visual exposure, such as the psychology major who explained that she learned how to outline because she “just kept seeing that [in the teacher’s notes] and that helps you figure [it] out” (Hillary 6). Still other students conveyed a similar sense of an unknowing absorption of skills by describing their learning as occurring on unconscious or subconscious levels. When asked if he ever applied writing skills from one course to another, one biosci major replied, “Not consciously. I’m sure it helped. But I don’t remember consciously thinking, ‘oh, I learned this [before] and this will help here’” (Miguel 4). A sociology student remarked about the possibility of carrying knowledge from lower- to upper-division writing: “I probably have—probably subconsciously” (Matthew 5). Another asserted: “I don’t think I’ve thought once ever since then back on that course, but I’m positive it did influence my writing” (Leor 5).

A second theme of students' learning by unreflective practice derives from a perception of writing as a static, unchanging skill that is acquired once and for all and merely applied as needed throughout college. Many students referred to a kind of pre-existing ability to write—developed in high school for some, “naturally” occurring for others—but seemingly unaffected by college writing (see Carroll). A sociology major claimed, “I have pretty much had my own format since high school,” belying the unique demands of college writing in general and upper-level disciplinary writing specifically (Matthew 4). A good number of students echoed this sentiment, that they were somehow inoculated against “bad writing” before college and attributed improvements in their writing to having that basic foundation: “I kind of panicked on my first essay” [in college composition],” admitted one chemistry major, “but I just wrote out the introduction, block, block, block, then conclusion. And I used that pretty much the rest of college.... So [first-year English] confirmed what I kind of already knew” (Josh 1). For others, it seems reflection and active transfer are not necessary for success: “I don’t know exactly what I learned about writing,” remarked one student. “I’ve always been a good writer... people have always really liked my work” (Allison 1). With these examples, we do not want to underestimate the value of good writing instruction before college, nor do we mean to downplay the influence of natural talent. Rather, we want to draw attention to the multiple ways that students explain their writing competence without reference to college instruction or mindful practice. When asked how she learned to write a compare-contrast paper, one political science student replied, “You know, I don’t know. Maybe it’s because of how I usually write” (Monique 4). Characterizing their writing development in such terms, these students may wonder, “how did I get here from there?”

Two other kinds of comments convey a similar sense of mystery in the educational process, or perhaps in our terms, a similar lack of pedagogical memory. Time and again, students remarked upon their inability to remember previous classes, some even to the point of frustration. Without such memories of earlier courses, texts, and assignments, students described their learning as spontaneous or random rather than sequenced, cued, or guided. When asked how she learned to write thesis statements, one student claimed, “It [just] happened.... You don’t really *learn* to do it” (Karen 4; my emphasis). Others suggested, along these same lines, that learning writing isn’t always about transfer so much as “doing”: “I think you just have to do it. I think it’s the fact of doing it” (Jacopo 6). Finally, the term “trial and error” was used by several students not to indicate active learning and cue retrieval but to portray the fortune of random insights and haphazard methods: “I did not get any direction from the TA...I think I just kind of figured it out—trial and error” (Miguel 4). Another student illustrates a similar sense of passivity in the learning process: “[It was] just trial and error. I’d write something, and [my teacher] would tell [me] what was wrong with it, and I’d rewrite it, and he’d tell me what was wrong with it,” and so on (Sean 6).

The pattern of “trial and error” is a particularly good example of cases when students, as suggested above, may be underestimating the cognitive complexity of a “trial-and-error” learning strategy, as well as downplaying their active role in such a process. Students present “trial and error” as a passive, rote, or mechanized mode of learning, yet more often than not, “trial and error” is an essentially active approach to learning a skill or applying it in new contexts. Anne Beaufort found a similar phenomenon in her study of professional writers. She discusses how expert writers often rely upon a form of “trial and error” to achieve the necessary writing performances in the workplace, repeating the task over and over again until the desired product was created. Beaufort notes that such instances of repetition are not as productive and versatile for these writers as a more complex process of substantive revision would be. However, capitalizing on existing and spontaneous practices, such as students’ “trial and error” strategies, could offer a way to redirect unreflective processes toward more deliberate learning connections. Prompting students’ pedagogical memories of their experiences in specific courses and their learning practices outside of class may be a way to both account more fully for students’ idiosyncratic processes and put those processes to work in more reflective ways.

## Unacknowledged Learning

In the preceding discussions of moments of active transfer and unreflective practice, we took students at their word, allowing their pedagogical memories to generate the terminology of our analysis. In what follows, we employ a more interpretive reading strategy, a shift required to account for the contradictions we identified in some of the students' interviews.

In some instances, students insisted that they learned nothing in their lower-division courses that served them, or that they could call upon, in their upper-division writing. We refer to these assertions as "statements of non-transfer." Despite their insistence that they had learned nothing at one point in the interview, at another point, students would report using some of what they had learned in Composition in their upper-division writing courses. We refer to this phenomenon as "unacknowledged learning." Finally, for some students, the act of reflecting on their writing memories during the interview compelled them to reconsider their statements of non-transfer and to move toward assertions of "active transfer."

The examples of non-transfer include statements of radical difference such as, "All my other classes . . . I feel like the papers they ask for are completely different than 39B . . . . It just seemed totally different" (Stephanie 2). Or, as a Mechanical Engineering major observed, "There's no expression in technical writing" (4), much less "social context and human spirit" (Justin 4). Students moving from Humanities based lower-division courses to the Sciences seemed the most likely to produce statements of non-transfer. Indeed for some making this move, the perceived differences constituted an impassible barrier. "I did [think about my lower-division writing course when I was taking my discipline's writing requirement], but they're not alike so it was hard to apply anything. The whole time I was writing, I was like, 'I wish this wasn't so dry. Just wishing it was more like Humanities Core' [the lower-division course]"(Mingyu 5). These students refer to legitimate disciplinary differences in purpose, style, and aim. However, their acknowledgment of difference----a potentially productive recognition---prevents them from considering equally significant similarities.

Only a few of our interviewees made statements of non-transfer that were not complicated by additional reflections, revised later, or contradicted. It is to the interviews that testify to this "unacknowledged learning" that we now turn. For example, one Biomedical Engineering major (Tariq) took the required two-quarter composition sequence at our university. While acknowledging that the research skills that he developed helped him in his upper-division BioSci writing course, this student insisted that engineers and scientists are solely interested in facts, not style or presentation. He explained: "In our classes, we don't have to write papers like that . . . No one's looking for a topic sentence. No one wants assertions. As long as you cite, it doesn't matter how you cite. It doesn't matter if it's MLA, APA. They just want the information, not how it's presented. Writing classes, humanities classes, things like that, it's more about presentation as well"(5). This student's subsequent statements, however, reflect his awareness that organization and presentation do matter in his discipline as well, and, thus, that what he learned about these aspects of writing in the Composition sequence may have in fact influenced his writing in his upper-division course more than he had acknowledged. When we asked him to reflect on the writing sample that he submitted for our study, he stated, "I think the way I *presented* it was good" (6, my italics), using the very same term to praise his upper-division BioSci paper that he had previously claimed only applied to writing in the humanities. When we asked him to explain what he meant by "presentation," he referred to additional characteristics of generic academic writing that he had previously asserted did not matter in his discipline's writing. Contrast the quote above with his elaboration on "presentation": "That it was understandable . . . Nothing to make them say, I don't get this. I was able to make connections. I did use topic sentences and assertions. I had a hypothesis"(6). Despite his use of the very same language, he did not at any subsequent moment in the interview rescind his previous statement about the unbridgeable divide between writing in the Humanities and the sciences.

A double major in Asian American studies and Studio Art (Samantha) presents another compelling example of unacknowledged learning. When asked about the writing knowledge she carried

from the lower-division Humanities writing course into her upper-division writing, she claimed: “There wasn’t anything I picked up from it that I still keep with me now. Yeah, I still write an intro, and I still have paragraphs and stuff like that”(7). And, yet, this assertion (that all she carried from Humanities Core were the basic component of generic academic writing) contradicts her earlier description of the course. For in response to an earlier question about the purposes of the writing assignments in the lower-division course, she had stated: “Develop your critical thinking skills . . . show other people your thought processes of why did you make that argument and how you came to that argument. So writing can help you think more clearly because you have to break down step by step and try to make it flow and each thought is connected to the next thought” (3). These observations suggest that she learned more than the elements of a five paragraph essay in the lower-division course, despite her earlier allegation.

Later in the interview, this student talked about dividing her senior thesis into sections, a process that required her to apply the same organizing principle that she learned in her lower-division course to a bigger project. She described: “I was able to break down the Korean and Black conflict. I don’t think I’ve ever written in sections prior to this . . .each one [section] has its own theme and you relate back to the larger paper” (7-8). Her observation that the sections needed to link back to the larger paper echoes her earlier comment about writing and critical thinking in the lower-division course; that is, that “each thought is [should be] connected to the next thought” (3). The links between critical thinking in lower- and upper-division became most apparent in her reflection about her approach to the challenge of defining the topic of her senior thesis: “How to approach it and which direction----which is the best way . . . [I] figured out which area I should focus on and how I could make my paper be not so all over the place . . . so figuring out which way will confuse people the least” (8). She recalled one of the goals of writing in Humanities as being the achievement of clarity about the argument by breaking it down into logical steps and conveying each of those steps to the reader. Though her comment about her thesis focused on organization, it relates to her earlier observations about the goals of analytic writing in the lower-division course. In both statements, she emphasized the obligation of the writer to communicate her argument in the most accessible and logical manner. Moreover, she recognized that in fulfilling this obligation for her reader, the writer herself achieved increased clarity. Interestingly, neither of these students noted the contradictions between their various statements.

Some students, however, did begin to connect their various writing experiences over the course of the interview, and eventually modified their earlier assertions of non-transfer. An Applied Ecology Major and International Studies minor (Nandini) presents a case in point. Though she initially claimed that “[lower-division writing] was entirely different because 100LW [the upper-division course] is geared toward scientific writing,” she referred to similar critical thinking and research skills in her descriptions of the writing she did in both courses. For her lower-division research paper, she explained, “We had to go out and search for books and articles that would corroborate and would relate what my topic was specifically” (2, *my italics*). Like her first-year research paper, her upper-division BioSci lab required that she find relevant scholarship and demonstrate the ways her work would contribute to it. She explained that students were responsible for “reporting what past studies have found on the issue and kind of highlighting or pinpointing some areas where future research might be needed” (2, *my italics*). In response to our questions, this student began to recognize the ways her learning in first-year Composition helped to prepare her for the intellectual challenges of upper-division science writing. She reflects: “Maybe I did develop the skills there [Hum Core], and I didn’t really realize it” (5).

An Engineering major (Sean) experienced a similar “lightbulb” moment over the course of the interview. He spoke enthusiastically about the ways in which the research and writing skills that he developed in the second quarter of the Composition sequence helped him with his engineering writing assignments. Just as vehemently, however, he claimed that the first quarter Composition course, which emphasizes critical reading and rhetoric course, was not “applicable.” Literally as he was speaking, though, this student began to rethink the relationship between these courses: “Maybe it’s [39B] not that much different. Instead of analyzing literature, we analyze whatever subject at hand – the figures, the

give, things like that . . . I'm saying that writing is very different from engineering writing, but then it's not really, because in 39B we were analyzing the actual pieces that we read, and, in engineering, we analyze the data that we're given. So I guess it's not that different" (Sean 5). When given the opportunity to reflect on the potential similarities in seemingly distinct writing assignments and contexts, this student showed signs of the most mature phase of writing knowledge, what Thaiss and Zawacki characterize as "coherence within diversity."

One cause of "unacknowledged learning" might be students' desire to distance themselves from their first-year writing experience. New to college, uncertain about their abilities, they enter their lower-division writing courses laden with insecurities, and sometimes resentment about the writing requirement. In response to a question about how she generated ideas in her lower-division course, a Psychology major commented: "'I don't remember. I tried to block it out" (Hillary 1). A Computer Science major could recall her disappointment about the location of her Composition class more than anything she learned about writing. She noted: "Wow, I'm sorry. I don't really remember a lot about 39B. That was my first class ever at UCI. It was in a trailer [laughter]. I was like, I'm going to university and I'm in a trailer! That's a little disheartening" (Kelly 1). This student's reflection conveys the high expectations and emotions that many first year college students bring with them into their Composition classes. This generalized anxiety, which carries along a potential for alienation and disappointment, coupled with their first encounter with the standards of "college writing" in the first Composition course, might interfere with students' ability to recollect specific writing pedagogies.

As Thaiss and Zawacki emphasize, positive emotions, such as passion, seem to have the opposite effect. Those students who enjoyed their assignment or topic generally had a much easier time recalling how what they had learned in their various writing courses informed their writing process. A Chemistry major, who emphasized in her interview that her ability to choose her paper topic made the lower-division Research and Argument class more interesting, could speak eloquently about what the course had taught her about writing: "I learned a lot about how to determine whether arguments were good or bad and whether or not I could use them in my writing" (Mandy 1). Another student so enjoyed her lower-division writing experience that she opted to become a Literary Journalism major and write for the campus newspaper: "I enjoyed the books we read, I liked the topics, I thought the essays weren't dry, the class discussions weren't dry, the TAs were really good" (Priti 5). This student easily articulated what she had learned about writing in her lower-division courses and how that learning informed her upper-division research, critical reading, and writing processes. In short, our interviews suggest that students might well learn something about writing in lower-division classes for which they exhibit little passion, but that they are less likely to bring that knowledge to mind when they enter their upper-division courses. Given the consensus amongst writing researchers that conscious recall helps students to learn, we echo the now familiar appeal for writing instruction that taps into students' passions.

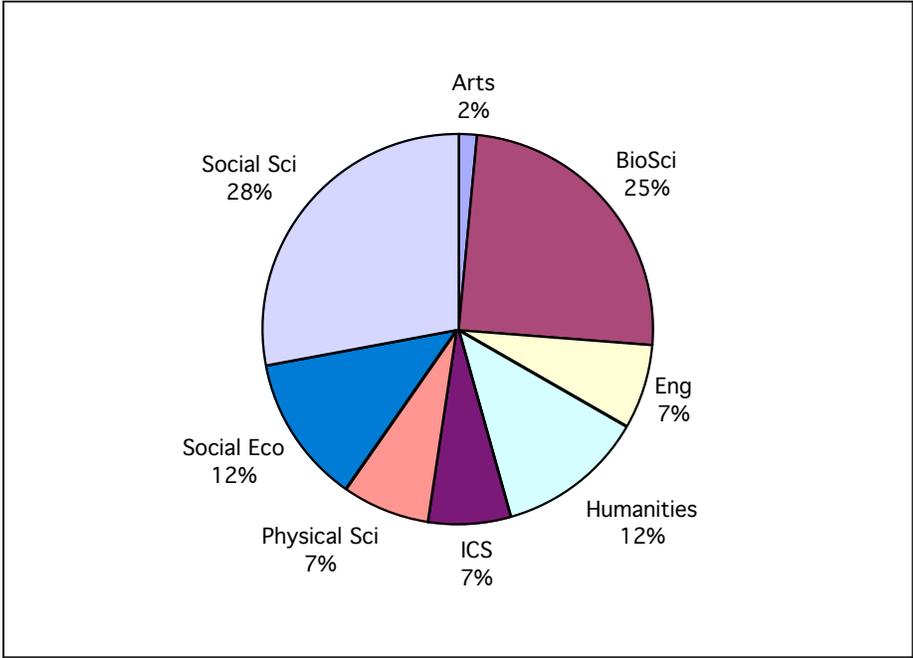
Our findings of "unacknowledged learning" further suggest that students might lack the occasion, or "affordances," to reflect on these connections. For in recalling their writing experiences for us during the interview, many of them did engage in the meta-cognitive reflection that writing researchers consider key to learning. This finding serves to underscore what writing instructors already know about the value of writer's memos, portfolios, introductions, and other forms of reflective assignments. Finally, students' lack of the meta-language of writing ---its genres, rhetorical dimensions, disciplinary specificity---might also impede them from making connections between their writing courses. Writing instructors at all levels, then, lower- and upper-division, should help students to engage in meta-cognition about writing, and encourage them to recognize the generic and situated nature of their writing practices, rather than suggesting, if only implicitly, that they are universalizable.

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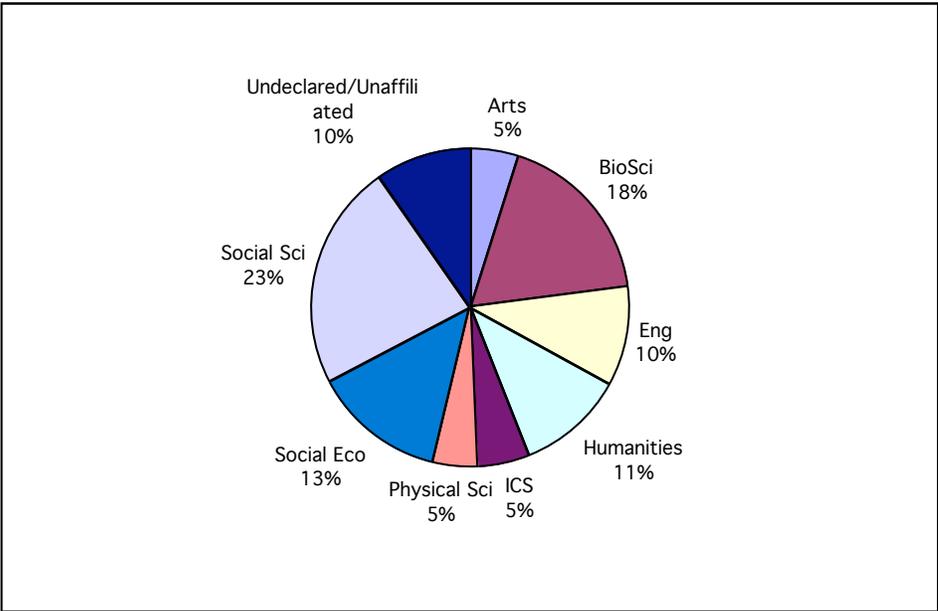
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**Appendix A**

**Schools (Interviewed Students)**

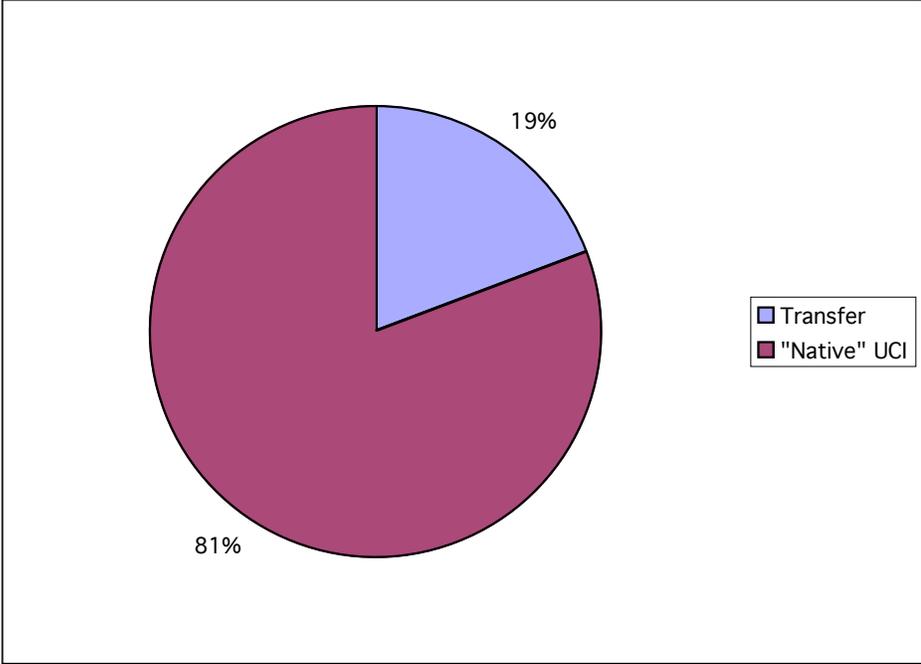


**Schools (General UCI Population, Fall '05)**

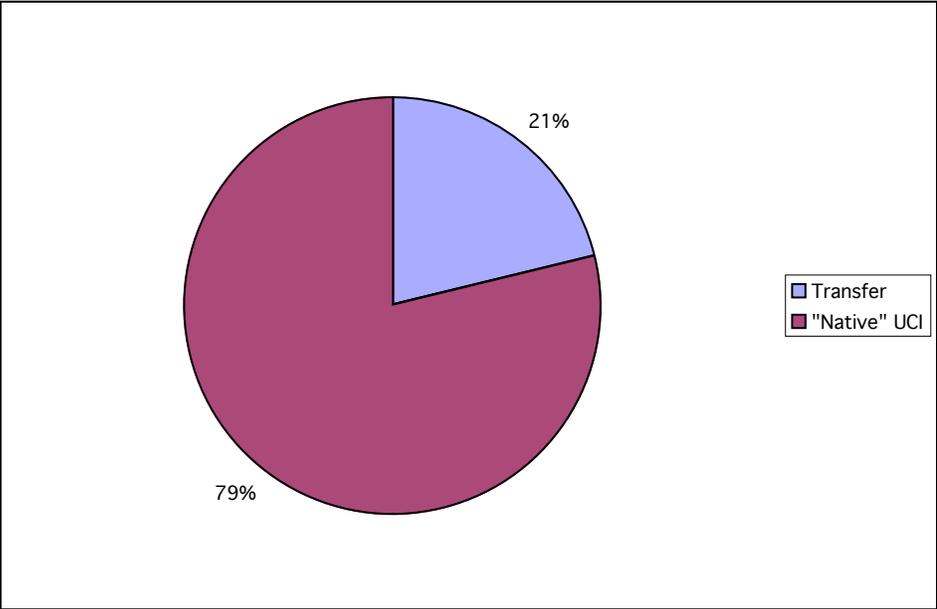


**Appendix B**

**Matriculation Status (Interviewed Students)**

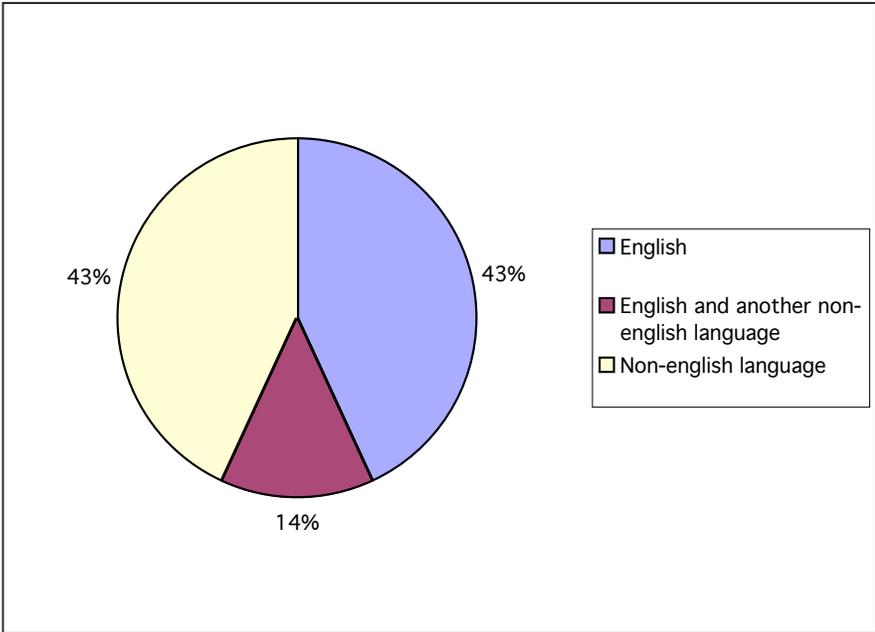


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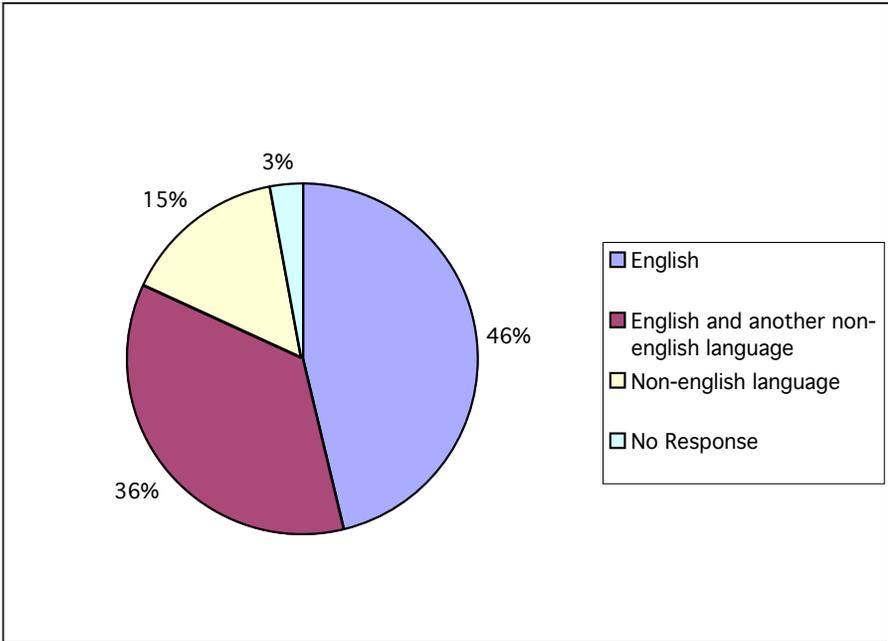


### Appendix C

#### First Language (Interviewed Students)

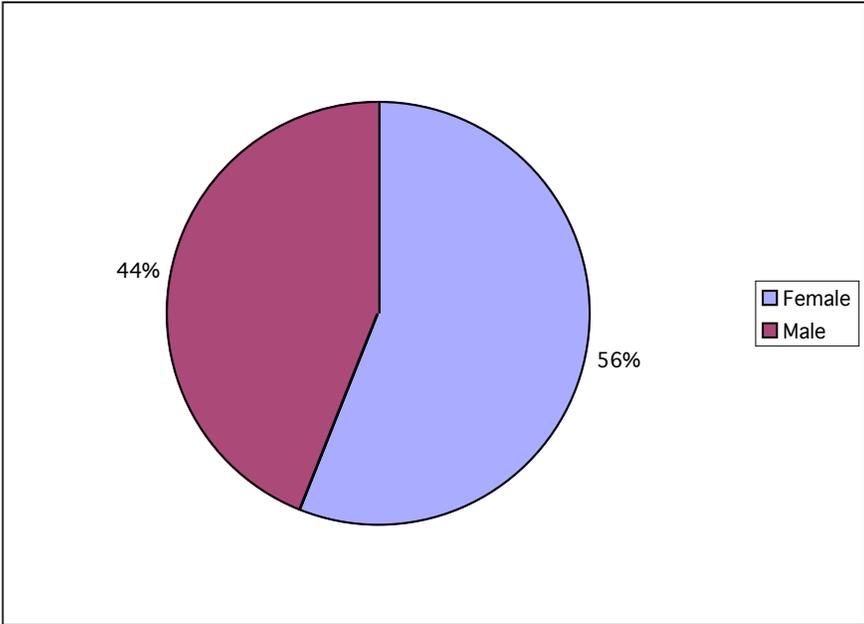


#### First Language (General UCI Population '06)

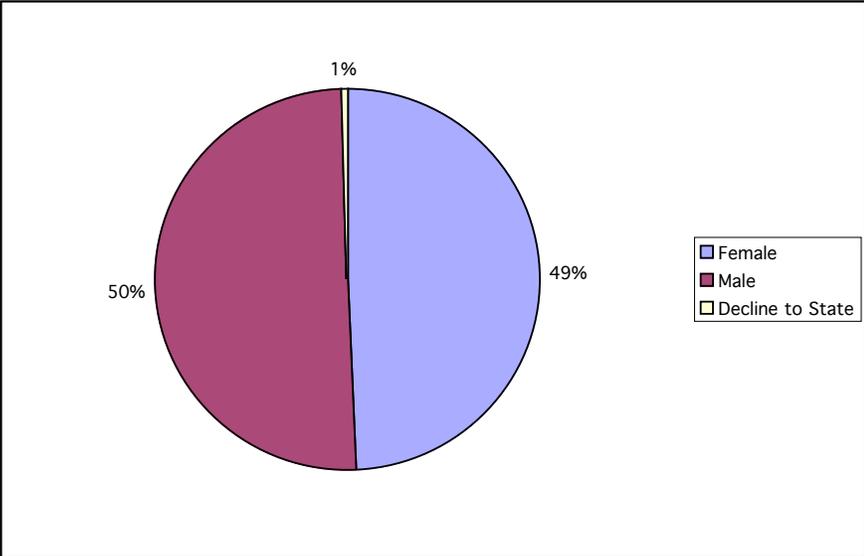


**Appendix D**

**Gender (Interviewed Students)**



**Gender (General UCI Population, Fall '05)**



**Appendix E**  
**Interview Questions**

Name:

College and Major:

First Language:

Matriculation Status:

Lower Division Writing

How did you fulfill the lower division writing requirement?

What did you learn about writing in these courses?

What terms come to mind for the types of writing you did in these courses/what types of assignments did you have (e.g., description, summary, analysis)?

How did you learn to generate ideas in this course?

Did you enjoy writing in this course?

What was writing meant to do in this course? What was its purpose?

Upper Division Writing and Writing in the Disciplines

How did you fulfill the upper-division writing requirement?

What did you learn in this course?

What terms come to mind for the types of writing you did in these courses/what types of assignments did you have?

How did you learn to generate ideas in this course?

Did you enjoy writing in this course?

What was writing meant to do in this course? What was its purpose?

Transferability of Writing Instruction

Can you apply anything you learned in lower-division writing courses to this course?

[Using the writing sample provided by the student]

What was the assignment for this paper?

What do you think you did best in this paper?

Where/how did you learn this particular writing strategy/technique?

Thinking across your writing experiences at UCI (and at transfer institution if applicable), how would you characterize good writing?